CLAIMS

1. A method of identification, in a succession of acquired images ($A_t$, $A_{t+1}$) each formed from a matrix of pixels to a first format, of a following sub-image ($SA_{t+1}$) extracted from a following acquired image ($A_{t+1}$) corresponding to a prior sub-image ($SA_t$) extracted from a prior acquired image ($A_t$), said sub-images ($SA_t$, $SA_{t+1}$) being formed from a matrix of pixels to a second format smaller than the first format, the method comprising the steps consisting of:

- calculating, for the prior sub-image ($A_t$), at least one distribution ($SH_t^h$, $SH_t^v$) of a characteristic quantity of each pixel for blocks forming a predefined partitioning of the sub-image;

- calculating the same distribution for at least two would-be sub-images of the second format extracted from the following acquired image ($A_{t+1}$); and

- determining the corresponding following sub-image ($SA_{t+1}$) from among the would-be sub-images, as the sub-image where the or each calculated distribution has the highest correlation with the same calculated distribution for the prior sub-image ($SA_t$) according to a predefined correlation law.

2. A method as claimed in Claim 1, characterized in that it comprises the steps of:

- calculating an extended distribution ($H_{t+1}^h$ , $H_{t+1}^v$) for an extended range of the following acquired image ($A_{t+1}$);

- calculating the correlations between the calculated distribution for the prior sub-image ($A_t$) and a corresponding portion of the extended distribution ($H_{t+1}^h$, $H_{t+1}^v$) for several shifts of the prior sub-image ($SA_t$) with respect to the following acquired image ($A_{t+1}$); and

- determining the corresponding following sub-image ($SA_{t+1}$) as the sub-image of the following acquired image ($A_{t+1}$) corresponding to the shift (m) of the prior sub-image

($SA_t$) with respect to the following acquired image ($A_{t+1}$) for which the calculated correlation between the distributions is the highest.

3. A method as claimed in Claim 1 or 2, characterized in that the blocks forming a predefined partitioning of the sub-image for calculating at least one distribution are lines and/or columns of the sub-image.

4. A method as claimed in any one of the preceding claims, characterized in that said characteristic quantity of each pixel is a parameter chosen from the group consisting of luminance, blue chrominance, red chrominance, red component, green component and blue component.

5. A method as claimed in any one of the preceding claims, characterized in that the correlation law is defined as the inverse of the Euclidean distance separating two distributions.

6. A method of determining the movement, in a succession of acquired images each formed from a matrix of pixels to a first format, of a following sub-image ($SA_{t+1}$) extracted from a following acquired image ($A_{t+1}$) with respect to a corresponding prior sub-image ($SA_t$) extracted from a prior acquired image ($A_t$), said sub-images ($SA_t$, $SA_{t+1}$) being formed from a matrix of pixels to a second format smaller than the first format, the method comprising the steps consisting of:

- identifying, in the following acquired image ($A_{t+1}$), the following sub-image ($SA_{t+1}$) corresponding to the prior sub-image ($SA_t$) by the use of a method as claimed in any one of the preceding claims; and

- calculating any movement between the prior and following sub-images from the position of the prior ($SA_t$) and following ($SA_{t+1}$) sub-images in the prior ($A_t$) and following ($A_{t+1}$) acquired images.

7. A method of stabilizing images in a succession of acquired images each formed from a matrix of pixels to a first format, comprising the steps consisting of:

- determining any movement in the succession of acquired images of a following sub-image ($SA_{t+1}$) issuing from a following acquired image ($A_{t+1}$) with respect to a

corresponding prior sub-image ($SA_t$) issuing from a prior acquired image ($A_t$), by the use of a movement method as claimed in Claim 6;

- correcting said determined movement in order to take account of the effect of an intentional movement and to eliminate the effect of an unintentional movement; and

- adopting as the following image ($SA_{t+1}$) a sub-image of the following acquired image ($A_{t+1}$) shifted from the prior sub-image ($SA_t$) by said corrected movement.

8. A computer program product for a data processing unit, comprising a set of instructions for executing steps of the method as claimed in any one of the preceding claims, when said program is executed by a data processing unit.

9. A device for identification, in a succession of acquired images ($A_t$, $A_{t+1}$) each formed from a matrix of pixels to a first format, of a following sub-image ($SA_{t+1}$) extracted from a following acquired image ($A_{t+1}$) corresponding to a prior sub-image ($SA_t$) extracted from a prior acquired image ($A_t$), said sub-images ($SA_t$, $SA_{t+1}$) being formed from a matrix of pixels to a second format smaller than the first format, the device comprising:

- means for calculating, for the prior sub-image ($A_t$), at least one distribution ($SH_t^h$, $SH_t^v$) of a characteristic quantity of each pixel for blocks forming a predefined partitioning of the sub-image;

- means for calculating the same distribution for at least two would-be sub-images to the second format extracted from the following acquired image ($A_{t+1}$); and

- means for determining the corresponding following sub-image ($SA_{t+1}$) from among the would-be sub-images, as the sub-image where the or each calculated distribution has the highest correlation with the same distribution calculated for the prior sub-image ($SA_t$) according to a predefined correlation law.

10. A device for determining the movement, in a succession of acquired images each formed from a matrix of pixels to a first format, of a following sub-image ($SA_{t+1}$) extracted from a following acquired image ($A_{t+1}$) with respect to a corresponding prior sub-image ($SA_t$) extracted from a prior acquired image ($A_t$), said sub-images ($SA_t$, $SA_{t+1}$) being formed from a matrix of pixels to a second format smaller than the first format, the device comprising:

- an identification device as claimed in Claim 9 for identifying in the following acquired image ($A_{t+1}$) the following sub-image ($SA_{t+1}$) corresponding to the prior sub-image ($SA_t$); and

- means for calculating the movement between the prior and following sub-images from the position of the prior ($SA_t$) and following ($SA_{t+1}$) sub-images in the prior ($A_t$) and following ($A_{t+1}$) acquired images.

11. A device for stabilizing images in a succession of acquired images each formed from a matrix of pixels to a first format, comprising:

- a device for determining the movement as claimed in Claim 10 for determining the movement in the succession of acquired images of a following sub-image ($SA_{t+1}$) issuing from a following acquired image ($A_{t+1}$) with respect to a corresponding prior sub-image ($SA_t$) issuing from a prior acquired image ($A_t$);

- means for correcting said determined movement for taking account of the effect of an intentional movement and eliminating the effect of an unintentional movement; and

- means for adopting, as the following sub-image ($SA_{t+1}$), a sub-image of the following acquired image ($A_{t+1}$) shifted from the prior sub-image ($SA_t$) by said corrected movement.